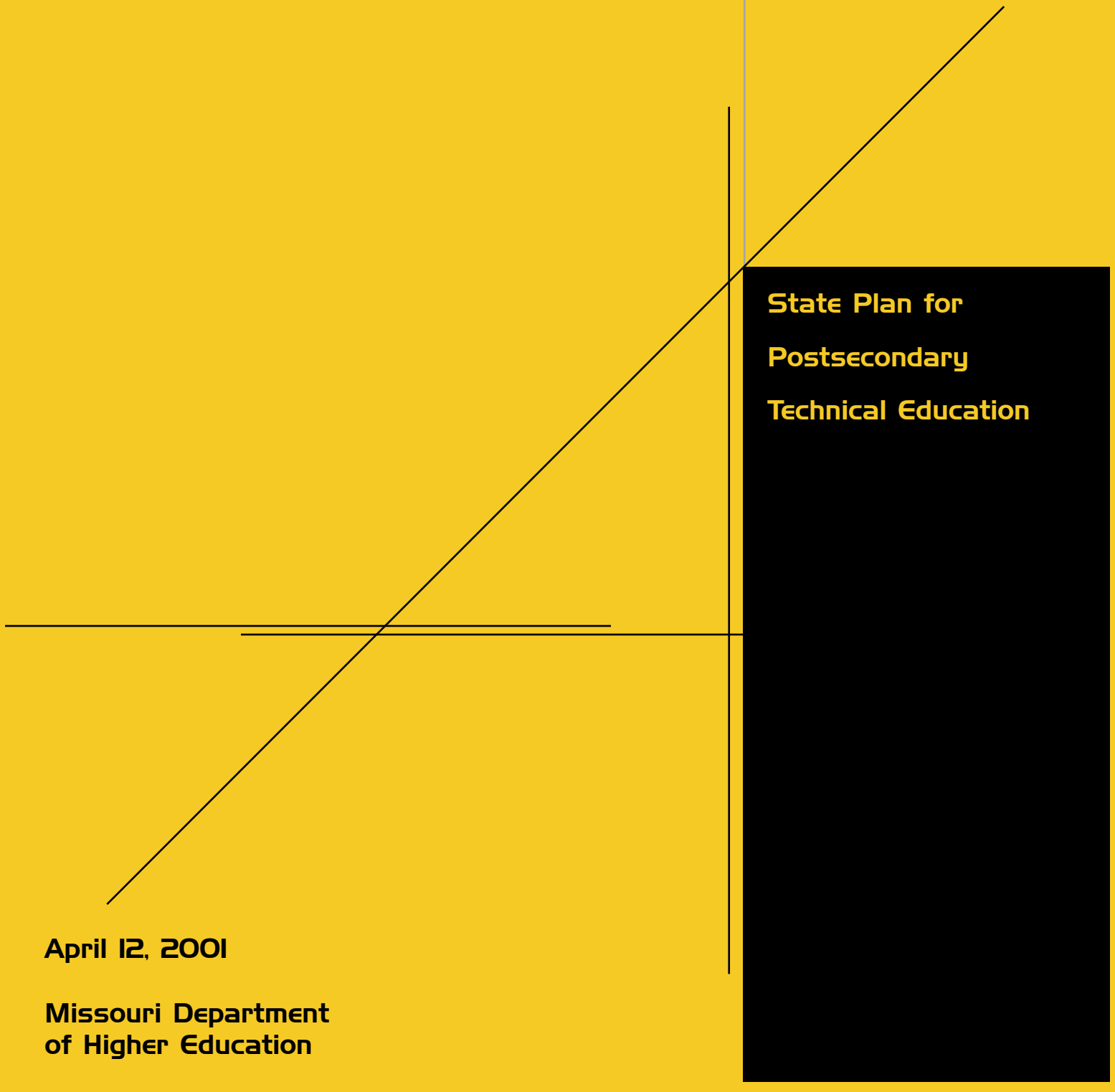
Technical Education

2001 Report on Progress Toward the Statewide Public Policy Initiatives and Goals for Missouri Postsecondary Technical Education



State Plan for Postsecondary Technical Education

April 12, 2001

Missouri Department of Higher Education

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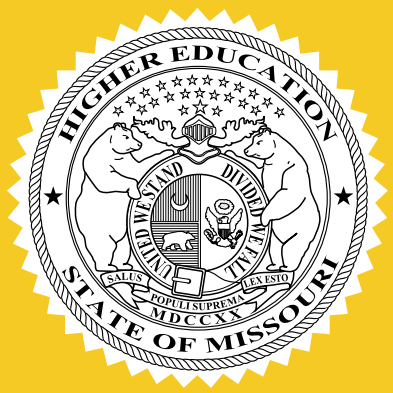

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INTRODUCTION

In 1995, Senate Bill 101 of the Missouri General Assembly directed the Coordinating Board for Higher Education to work in cooperation with the State Board of Education to implement a comprehensive system of postsecondary technical education throughout Missouri. The following year, the Coordinating Board developed the *State Plan for Postsecondary Technical Education*, a collaborative, five-year funding plan for the statewide implementation of a system that trains highly-skilled technicians to enter Missouri's industries.

The state plan calls for the strengthening of existing and the development of new associate of applied science (AAS) degree and technical certificate programs at two-year colleges, and related baccalaureate degrees at certain four-year institutions. It also designates the community colleges as the primary providers of postsecondary technical education at the AAS degree-level, and Linn State Technical College as the statewide provider of highly specialized technical education. In addition, the plan calls on Southwest Missouri State University-West Plains for postsecondary technical education, and Central Missouri State University, Southeast Missouri State University, Missouri Western State College, and University of Missouri-Rolla for bachelor's degrees in engineering and engineering technologies.

In April 1998, the Coordinating Board for Higher Education established baseline indicators against which outcomes of the state's investments in postsecondary technical education are measured. A year later, in April 1999, the Coordinating Board approved a set of performance measures to be used to guide research on the results of Missouri's postsecondary technical education initiatives. The approved performance measures are designed to help answer the question: "To what extent is the investment of state aid in new and expanded postsecondary technical education programs making a significant difference in the workforce development system in Missouri?"

Since its beginning, the funding plan to implement the *State Plan for Postsecondary Technical Education* has been set at $25 million, and the governor and General Assembly have generously supported this request. A history of state general revenues appropriated toward postsecondary technical education is available in Appendix 2.

A summary of the results and accomplishments of the state's investment in postsecondary technical education was presented at the April 1999 Coordinating Board meeting. The agenda item summary follows on page 4.

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SUMMARY OF THE FINDINGS

2001 Report on
Progress Toward the Statewide Public Policy Initiatives and Goals
for Missouri Postsecondary Technical Education

This report describes the results and accomplishments of three years of Regional Technical Education Council planning initiatives of the statewide goals established for Missouri higher education in 1996 by the Coordinating Board for Higher Education that are incorporated in the board's *State Plan for Postsecondary Technical Education*. Much has been accomplished, and substantial progress has been made in improving the state's ability to deliver education and training opportunities to the residents in the service regions of Missouri's public two-year institutions. This report also presents the progress of the state's two-year and selected four-year public institutions in meeting the challenges of enhancing education and training services in postsecondary technical education.

The following narrative and tables in this annual report lead with FY 1995 and FY 1996 baseline data, and through comparative descriptions, describe the respective institution's involvement in the state's investment in postsecondary technical education. The tables further detail significant results and accomplishments, indicate trends in progress, and in some cases project future activities from FY 1998 through FY 2001. These data were provided through individual institutions' annual RTEC reports, and were subsequently compiled and analyzed in the aggregate by CBHE staff. Data elements were established with the Coordinating Board's April 1999 approval of the Missouri public two-year accountability measures for postsecondary technical education, which follows.

As the state's system of higher education transitions through the challenges of implementing a successful postsecondary technical education and training system for the state's workforce, **access** to the state's system of higher education must be continually examined in terms of financial, geographic, and programmatic access to learning success, and higher earnings success. A continued commitment to and examination of the **quality** of teaching and learning environments must be made. Finally, Missourians need to be assured that the **efficiency** of the state's delivery of postsecondary technical education is performance-based, maximizes the impact of funding and sharing of resources, and minimizes the unnecessary duplication of resources.

AGENDA ITEM

Results of the State Plan for Postsecondary Technical Education
Coordinating Board for Higher Education
April 12, 2001

DESCRIPTION

This agenda item provides a progress report on the results and accomplishments from the state's investments in postsecondary technical education since implementing *The State Plan for Postsecondary Technical Education* in July 1996. At the April 1998 board meeting, a similar agenda item provided baseline indicators that continue to be measured through the board's data collection and research analysis process. This report describes evolving and important trends associated with postsecondary technical education since April 1998.

Performance and Outcome Measures

Section 178.637(2), RSMo, as adapted in *The State Plan for Postsecondary Technical Education,* requires that the Coordinating Board monitor the successes and outcomes of the state's system of postsecondary technical education. At the April 1999 meeting, the board approved a set of performance measures for monitoring the role of the state's community colleges and Linn State Technical College in meeting the board's goals for *The State Plan for Postsecondary Technical Education* initiatives. These measures collectively assess the extent the investment of state aid in targeted new and expanded postsecondary technical programs are making a significant difference in the workforce development system of Missouri. Targeted technical programs are related to computer information systems technologies, engineering-related technologies, advanced health technologies, mechanic and repairer technologies, precision production trades, and science technologies, all which lead to certificate, AAS/AS, and technology bachelor's degrees.

The board's performance measures and desired outcome statements are attached to this Agenda Item Summary. The following questions provide a context for assessing the progress being made in postsecondary technical education:

1. Has geographic and programmatic access to Missouri's targeted technical education programs increased?
2. Has targeted technical program productivity improved through increases in student participation, graduation, and job placement?
3. Have targeted program graduates achieved financially rewarding job placement and wages?
4. Has the quality of targeted technical programs improved?

1. Has geographic and programmatic access to Missouri's targeted technical education programs increased?

Geographic and programmatic access has increased based on the following results:

- Communities serving as face-to-face classroom access points have increased to a total of 67; up from 17 in baseline FY 1996;

- Since baseline FY 1996, 100 new targeted certificate and AAS/AS technical degree programs have been added to the program inventory to total 357 programs, while selected public four-year institutions have added 12 bachelor's, and 11 master's degree programs, and one doctoral degree program in targeted technical fields.

- From relatively few instructional partnerships in FY 1997 (year one), all 57 AVTSs now have 525 articulation agreements between AVTS secondary and adult programs, and two- and four-year institutions that deliver targeted postsecondary technical programs;

- Contracted partnerships and well-established articulation agreements between private career (proprietary) schools and targeted postsecondary technical programs have produced only six (6) since FY 1997 (year one);

- With as few as four public baccalaureate degree institutions and 22 articulation agreements in FY 1997 (year one), all two-year institutions now have 157 articulation agreements between targeted two-year AAS/AS degree programs and public baccalaureate technology degree programs among 25 Missouri and three Kansas and Iowa four-year institutions;

- Missouri communities serving as two-year college ITV connectivity points have increased from approximately a dozen in FY 1997 (year one) to a total of 81 AVTSs, comprehensive high schools, and four-year locations; and

- Targeted programs delivered via instructional television (ITV) networks were non-existent in FY 1997 (year one), however by FY 2000 a total 25 ITV courses served 151 duplicated students.

2. Has targeted technical program productivity improved through increases in student participation, graduation, and job placement?

The productivity of targeted technical programs has improved based on the following data:

- The number of 2000 Missouri public high school graduates going to college and enrolling in targeted postsecondary technical programs totaled 1,157, which is up 22 percent since FY 1996 (second baseline year). This 1,157 figure compares to an average of 25,000 Missouri high school graduates who attend college at a public two- or four-year institution;

- Compared to FY 1999 (year three), the number completing coursework in targeted technical programs, at both on- and off-campus sites was steady at 11,396, however this figure is up 39 percent from FY 1995 (first baseline year);

- Compared to baseline FY 1995, current enrollment numbers have increased in computer information systems (63 percent), engineering related technologies (18 percent), mechanics and repairer technologies (263 percent), and precision production trades (35 percent);

- FY 2000 (year four) duplicated enrollments at the identified off-campus sites totaled 3,205, which is up from 2,260 (20.4 percent) enrollments in FY 1999 (year three), and up 156 percent since FY 1997 (year one);

- Since FY 1997 (year one), an estimated cumulative total of 2,800 unduplicated citizens residing outside the taxing districts of community colleges, have taken advantage of coursework leading to new and upgraded skills in targeted technical areas; and

- From the beginning of FY 1997 (year one) through FY 2000 (year four), a cumulative total of 1,448 students have graduated from targeted one- and two-year technical certificates; and 3,700 from targeted AAS/AS degree programs.

3. Have targeted program graduates achieved financially rewarding job placement and wages?

Students graduating from targeted technical programs have achieved financially rewarding job placement and wages based on the following data:

- Of a sample of 1,341 students graduating during FY 1999 (year three) from targeted technical certificate and AS/AAS degree programs, 74.6 percent reported that they found jobs relating directly to their field of technical training, or pursued additional education in the same field, which is about the same (73.9 percent) as other non-technical vocational graduates.

- Targeted technical program graduates generally earn wages that are higher than the median wages of non-technical graduates from Missouri's public institutions. Technical certificate graduates from FY 1998 (year two) earned $25,723 in median wages compared to $21,328 (N=719) for non-technical certificate graduates. Technical AAS degree graduates from FY 1998 earned $26,802 in median wages compared to $22,448 (N=2,789) for non-technical AAS degree graduates. At the baccalaureate degree level, those FY 1998 graduates receiving technology-related bachelor's degrees (engineering degrees were not included) earned $36,831 in median wages compared to $24,476 (N=8,130) for graduates in other non-technical fields; and

4. Has the quality of targeted technical programs improved?

The quality of targeted technical programs is generally improving based on the following data:

- In FY 2000 (year four) the state's 12 Regional Technical Education Councils (RTECs) listed a total membership of nearly 562 constituents, including 194 (35 percent) employers, which is about the same number as past years;

- In FY 1997 (year one) except for a couple of two-year institutions, none had working partnerships with union and non-union apprenticeship training programs. By FY 2000 (year four), twelve (12) two- and four-year public institutions have working partnerships with 204 different labor union apprenticeship training schools in Missouri;

    - Using baseline FY 1996 data, 55 of 858 (6.4 percent) graduates from targeted AAS/AS degree programs subsequently transferred to Missouri's four-year public institutions. By spring 2000 (year four) 38 of the original 55 (69 percent) had also graduated from baccalaureate technology programs at Missouri's public four-year institutions;

    - Since FY 1997 (year one), a small number (11) of the 78 new and 169 preexisting targeted AAS/AS degree technical programs are currently accredited by NAIT, ABET, or other nationally recognized associations or agencies;

    - Since FY 1997 (year one), a relatively small number (41) of the 356 targeted technical programs currently require graduates to pass licensure, registration, certification, or applicable industry-based skill set examinations; and

    - Since FY 1997 (year one), there has been a gradual increase in a variety of professional and technical skill-building activities designed for full- and part-time faculty teaching in targeted technical programs.

    - Since FY 1997, Linn State Technical College has achieved accreditation by North Central Association of Colleges and Schools Commission on Institutions of Higher Education.

Issues Needing Further Attention and Discussion

The attached Executive Summary is provided to communicate in more detail FY 2000 (year four) progress that is being made toward achieving the statewide public policy initiatives and goals for Missouri's postsecondary technical education system. However, certain results raise additional issues that need further discussion and monitoring over future months. These include:

- Too few Regional Technical Education Councils are meeting regularly and involving their employers directly in regional needs assessment and evaluating targeted program effectiveness.

- Regional Technical Education Councils should intensify efforts to promote postsecondary technical education, and increase the college participation rates of recent high school graduates into targeted certificate or AAS degree programs.

- Regional Technical Education Councils should intensify efforts to prioritize investments in new targeted program development that are at the emerging and advanced "cutting-edge" of technology.

- There appears to be evidence that a few institutions may be reallocating RTEC appropriations planned for targeted technical program infrastructure and delivery, but actually support off-campus AA degree lower division general education expansion.

- Too few institutions are working toward achieving specialized national accreditation, licensure, or certification designations of targeted technical programs.

- The State Auditor is concerned that in some incidences, Regional Technical Education Councils are not spending all their planned annual appropriation on postsecondary technical education initiatives, and therefore dollars are carried forward into the next fiscal year.

- Instructional television (ITV) networks and equipment, which were purchased with technical education appropriations, appear to be used for the distribution of dual credit and lower division general education coursework rather than primarily for the delivery of technical program coursework.

- There appears to be a lack of coordination and alignment of goals among such programmatic initiatives as: Tech Prep, School-to-Careers, ABE/GED, English as a Second Language, A+ Schools, One-stop Career Centers. Regional Technical Education Councils may be underutilized as an effective means to achieve workforce development, education, and training results within the service regions.

- Too few two-year institutions are implementing collaborative educational initiatives with the proprietary—private career school sector (where available).

- Structured by the set of mission enhancement accountability measures approved by the board at their April 1999 meeting, Linn State Technical College has accomplished many important mission outcomes central to its original master plan. The board also recognized Linn State Technical College's successes that were documented in its North Central Association Self-Study Report for Initial Accreditation. Linn State Technical College was granted initial accreditation on August 7, 2000, by North Central Association of Colleges and Schools Commission on Institutions of Higher Education.

STATUTORY REFERENCE

Section 173 RSMo, relating to the responsibilities of the Coordinating Board for Higher Education and Section 178.637.2 RSMo, (Senate Bill 101, 1995)

RELATED BOARD POLICY

Coordinating Board for Higher Education **Public Policies Affecting the Missouri Higher Education Delivery System,**
Chapter VI: Postsecondary Technical Education,

C: State Plan for Postsecondary Technical Education
H: Linn State Technical College Five-year Master Plan

CONSULTATIONS AND RELATED BOARD MEETING ITEMS

This past year, the CBHE staff continued to collaborate with community college presidents and chancellors, institutional researchers, chief academic affairs officers, and Regional Technical Education Council directors/coordinators to refine the process of gathering data to appropriately analyze and interpret the performance measures. Professors and staff researchers from the Economics Department of the University of Missouri-Columbia were also consulted on research design and methods, and were employed to collect and analyze much of the data compiled in this report. Key officials from the Missouri Employment Training and Education Council (MTEC), specifically the Division of Adult and Vocational Education of the Department of Elementary and Secondary Education, and the Division of Workforce Development of the Department of Economic Development, assisted in reviewing and commenting on these performance results as they relate to other statewide and federal workforce development, training, and education initiatives.

RECOMMENDED ACTION

This is an information item only.

ATTACHMENTS

Attachment A: Executive Summary: *2001 Report on Progress Toward the Statewide Public Policy Initiatives and Goals for Missouri Postsecondary Technical Education*
Attachment B: Performance Measures of Missouri Public Community Colleges

Attachment C: Performance Measures of Linn State Technical College

Results of the State's Investment in Meeting Statewide Goals
For Postsecondary Technical Education

GEOGRAPHIC AND PROGRAMMATIC ACCESS

The number of regional employers who are actively engaged in planning postsecondary technical education initiatives through Regional Technical Education Councils.

- According to Table 1, lists the FY 2000 12 Regional Technical Education Councils (RTECs) total membership of nearly 562 constituents, including 194 (35 percent) employers. The remaining membership includes representation from local governmental and community development officials (12 percent), K-12 (11 percent), AVTSs (12 percent), state agencies, labor unions, a small number of proprietary schools, and local, county, and state elected officials.

The number of communities becoming access points for the delivery of postsecondary technical education is increasing.

- By the end of FY 2000, postsecondary technical education degree coursework was actually delivered to 47 communities outside the taxing districts but within the RTEC service regions and at all 17 campuses of the 12 community college taxing districts. As per the state plan Linn State Technical College, SMSU—West Plains, and Missouri Western State College were also contributors. These 67 on- and off-campus access points were consistent with the FY 1999 results.

- Table 2 summarizes the improvement in geographic access when comparing FY 1996 baseline information to FY 2000 (year four) actual on indicators on Missouri counties, population, square miles, and communities served.

The number and capacity of targeted AAS/AS, baccalaureate, master's and doctoral technical degree programs are increasing.

- Table 3 and Table 4 indicate that since July 1, 1996 through March 1, 2001, the 12 community college-sponsored RTECs, in affiliation with Linn State Technical College, Missouri Western State College, and SMSU—West Plains, implemented 110 new targeted postsecondary technical programs, including 32 technical certificates and 78 technical AAS/AS degree programs, or a 45 percent increase over the baseline established before FY 1997. Targeted technical program capacity now totals 109 technical certificates, and 247 AAS/AS degrees.

- Since July 1, 1996 selected four-year institutions added 12 bachelor's, 11 master's, and one doctoral degree programs in targeted technical fields such as: interactive digital media (BS), electrical engineering technology (BS), computer engineering technology (BS, MS), computer information systems engineering (MS), computer engineering (BS, MS, Ph.D.), industrial management (BS, MS), and manufacturing engineering (MS.)

The number of articulation agreements and partnerships between AVTS secondary and adult programs, and two- and four-year institutions delivering targeted postsecondary technical programs is increasing.

- According to Table 5, by the conclusion of FY 2000, the RTEC organizations made significant progress in enhancing accessibility and collaboration among the state's 57 (100 percent) area vocational technical schools (AVTSs) and 44 comprehensive school districts. Approximately 525 duplicated secondary and adult preparatory programs were articulated with one or more of the state's public two-year institutions, Missouri Western State College, Linn State Technical College, and SMSU—West Plains.

The number of articulation agreements between targeted two-year AAS/AS degree programs and public baccalaureate technology degree programs is increasing.

- Table 6 shows that by the end of FY 2000, 25 of Missouri's four-year public and independent institutions, and three of Kansas' and one of Iowa's four-year institutions continued to make significant progress in encouraging students to transfer technical AAS degree program credits toward equivalent technology bachelor's degree programs. By the conclusion of FY 2000, the two-year institutions consummated 157 technology bachelor's degree transfer and articulation agreements, up nearly 55 percent since FY 1999.

The number of articulation agreements and partnerships between private career (proprietary) schools and targeted postsecondary technical programs is increasing.

- During FY 2000, three of the public community colleges entered into instructional partnerships with six private career schools. Table 7 shows that arrangements varied from transferring proprietary school credit into targeted AAS degree programs, and transferring an AAS degree into one proprietary school's bachelor's degree program.

The number of articulation agreements between labor union apprenticeship schools and targeted postsecondary technical programs is increasing.

- As shown in Table 8, the number of relationships between union and non-union apprenticeship training schools and the state's system of two-year providers has greatly increased. As of June 30, 2000, five community colleges received CBHE approval to offer the AAS Degree in Apprenticeship Specialties, which enables apprentices and journeymen to transfer apprenticeship-training competencies toward an AAS degree equivalency coursework.

- Further, Table 8 shows that by the end of FY 2000, 11 two-year institutions and Missouri Western State College had working partnerships with 204 different labor union apprenticeship training schools in Missouri. These results are up dramatically since FY 1999. Apprentices and journeymen can expect to convert apprenticeship training to about 30 equivalent credit hours and be applied toward targeted AAS degree programs.

The number of targeted technical programs delivered via instructional television (ITV) networks to communities located in the service regions is increasing.

- Individual RTECs have invested technical education state aid in the development of synchronous interactive two-way instructional television networks (ITV) for the purpose of delivering technical skill and required general education coursework to outreach locations. Table 9 shows that by June 30, 2000, 81 unduplicated AVTSs and comprehensive high schools and, regional state universities, were served by ITV network connections from respective main campuses of each community college, SMSU-West Plains, Linn State Technical College, and Missouri Western State College and the University of Missouri System's Telecommunication Community Resource Centers (TCRC).

- Further, Tables 9 establishes that by the end of FY 2000, using the ITV systems purchased mostly by technical education appropriations, the two-year institutions transmitted 25 courses to 151 duplicated students who enrolled in targeted postsecondary technical education coursework. One hundred twenty (120) duplicated courses were delivered by the two-year institutions to 1,128 duplicated students enrolled in ITV lower division general education and high school dual credit coursework. The average ITV class size was about 10 students and totaled 1,279 duplicated students or approximately 127 annualized FTE statewide.

PROGRAM PRODUCTIVITY, PARTICIPATION, AND GRADUATION

The number of recent high school graduates entering targeted postsecondary technical programs is increasing.

- In baseline FY 1996, 945 Table 10 shows that recent high school graduates enrolled in targeted postsecondary technical programs. However, by FY 2000 (Fall 1999) the number of recent high school graduates entering targeted technical programs rose to 1,157 or a 22 percent increase over the FY 1996 baseline year.

The number of participants completing coursework in targeted technical programs is increasing at both on- and off-campus sites.

- Table 11 indicates that at the conclusion of FY 2000, the cumulative number of unduplicated students participating in targeted technical programs, which were offered at both on- and off-campus facilities, reached 11,396 students. This is slightly more than the 11,352 posted in FY 1999. When comparing the FY 1995 first baseline year to FY 2000, student participation increased by 39 percent.

- Table 11 also shows that student participation among targeted technical programs grew from baseline FY 1995 to FY 2000. Computer information systems technologies grew by 63 percent; engineering-related technologies grew by 18 percent; mechanic and repairer technologies grew by 263 percent; and precision production technologies grew by 35 percent.

- Table 12 further establishes that by the end of FY 2000, the 12 RTECs delivered 243 face-to-face classroom/lab coursework in targeted certificate and AAS/AS degree technical programs, to 3,205 duplicated students at 47 off-campus and outreach sites. The average class size was 9.5 students. When the 3,205 students were mathematically unduplicated, the

estimated number of individual off-campus participants total about 1000 (1,054). Since FY 1997, on a cumulative basis, about 2,800 unduplicated citizens have availed themselves to off-campus/outreach sites and participated in coursework leading to new and upgraded skills in targeted technical areas.

- Table 13 provides a detailed summary of student participation at off-campus and outreach centers operated by the respective Regional Technical Education Councils (RTECs.) The table also indicates the different types of targeted technical programs and the approximate number of course section completers.

The number and percentage of students graduating with certificate, AAS/AS, and baccalaureate degrees from targeted technical programs are increasing.

- Table 14 delineates the graduation trends and cumulative numbers of targeted technical programs, including certificate and degree recipients since FY 1995 baseline year.

- Table 15 shows that by the end of FY 2000, two- and four-year public institutions produced a total of 1,723 one- and two-year vocational certificates. Of this number, 387 (23 percent) students graduated with targeted technical program certificates, which was a 32 percent increase over the baseline FY 1995 data.

- Since FY 1997, Table 16 indicates that the institutions have produced a cumulative total of 1,448 new graduates in targeted one- and two-year technical certificates. When comparing baseline FY 1995 to FY 2000, the largest targeted technical certificate program gainer was computer information systems at 306 percent.

- According to Table 17, by FY 2000, all two- and four-year public institutions produced a total of 6,790 AA, AAS, or AS degrees. Of this number, 1,020 (15 percent) students graduated from targeted AAS/AS degree technical programs, which was a 25 percent increase over the baseline FY 1995 data.

- Since FY 1997, Table 18 establishes that institutions have produced a cumulative total of 3,700 new graduates in targeted AAS/AS technical degree programs. When comparing baseline FY 1995 to FY 2000, the largest targeted technical AAS/AS degree gainers were 133 (303 percent) increase in mechanics and repairers, and 161 (89 percent) increase in precision and production trades.

- By observing Table 19, all four-year public institutions produced a total of 16,674 bachelor's degrees in FY 2000. Of this number 1,289 (8 percent) students graduated from targeted technology bachelor's degree programs (does not include engineering). This figure compares to 1,093 students that graduated in FY 1999, or an 18 percent increase.

FINANCIALLY REWARDING JOB PLACEMENT AND WAGES

The annual earnings of graduates employed in occupations related to targeted technical training are generally higher than average salaries of non-technical graduates from Missouri public institutions, who have entered Missouri's workforce.

- Using sampling techniques, 1,921 students graduated during FY 1998 (1997/1998 academic year) from targeted technical certificate, AAS/AS, or technology bachelor's degree programs. Table 20 displays earned median annual salaries after the first 13 months of employment.

- Targeted technical program graduates generally earn wages that are higher than the median wages of non-technical graduates from Missouri's public institutions. Technical certificate graduates from FY 1998 earned $25,723 in median wages compared to $21,328 (N=719) for non-technical certificate graduates. Technical AAS degree graduates from FY 1998 earned $26,802 in median wages compared to $22,448 (N=2,789) for non-technical AAS degree graduates. At the baccalaureate degree level, those FY 1998 graduates receiving technology-related bachelor's degrees (engineering degrees were not included) earned $36,831 in median wages compared to $24,476 (N=8,130) for graduates in other non-technical fields.

- When observing the specific median wages of this same sample of students that graduated from targeted technical programs in FY 1998 (1997/1998 academic year), Table 21 shows the following salary levels, after 13 months of employment, including:

- When observing the specific median earnings of samples of students that graduated from certificate and AAS/AS targeted technical programs in FY 1998 (1997/1998 academic year), salary level trends are indicated in Tables 22, 23, 24, 25, 26, and 27, including:

The number and percentage of students graduating from targeted technical programs and finding jobs in related occupational fields or continuing their education are increasing.

- During FY 1999 (1998/1999 academic year), 1,341 students graduated from targeted technical certificate and AS/AAS degree programs. Using sampling techniques, 1,000 (74.6 percent) reported that they found jobs relating directly to their field of technical training, or pursued additional education in the same field. Table 28 indicates that this placement rate of 74.6 percent for targeted technical programs compared favorably with the overall state average for all vocational postsecondary programs at 73.9 percent. (Source: DESE Annual Job Placement Service 180 Day Reports)

PROGRAM QUALITY AND IMPROVEMENT

The number of students graduating from targeted certificate and AAS/AS degrees, and then transferring and graduating from baccalaureate technology programs at public four-year institutions is increasing.

- Using FY 1996 as a benchmark year, the Missouri two-year institutions and CMSU, SEMO, MWSC, and MSSC conferred 858 AAS/AS degrees in targeted technical programs. Of this cohort of 858 AAS/AS degree recipients, 55 transferred to Missouri's four-year public colleges and universities. By the spring semester of 2000, 38 (69 percent) of the original 55 four-year public colleges and universities earned a bachelor's degree in a comparable targeted technology program.

The number of targeted technical programs that become successfully accredited by NAIT, ABET, or other nationally recognized associations or agencies is increasing.

- According to Table 29, 11 targeted technical programs became accredited or certified by a recognized industry organization, during FY 2000. Over the next four years, each institution plans to achieve appropriate national or industry-based accreditation in 70 targeted technical programs. Table 30 displays a listing of abbreviations and complete names of accreditation agencies, associations, and other affiliations to targeted technical programs.

The number of graduates from targeted technical programs passing licensure, registration, certification, or applicable industry-based skill set examinations is increasing.

- As shown in Table 31, 11 of 14 two-year colleges and Missouri Western State College integrated the use of industry-based skill assessment of their AAS/AS graduates in 41 of their targeted technical programs effective June 30, 2000.

The technical skills of faculty teaching in targeted technical programs are current and effective through increased in-service training.

- Table 32 establishes that in FY 2000, individual institutions reported that a gradual increase in the variety of professional and technical skill-building activities is occurring among full- and part-time faculty teaching in targeted technical programs. Professional development activities range from opportunities to return to industry during the summer, attending technology conference, participating in equipment training at factory schools, to earning bachelor's and master's degrees.